

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) A polishing apparatus comprising:

a polishing section having a turntable with a polishing surface and a top ring for holding a substrate and pressing the substrate against said polishing surface to polish a surface having a semiconductor device thereon;

a cleaning section for cleaning at least a polished surface of the substrate which has been polished, said cleaning section having an electrolyzed water supply device for supplying electrolyzed water to the polished surface of the substrate to ~~clean at least a~~ form a metal-oxide film on the polished surface of the substrate ~~while supplying said electrolyzed water to the substrate and a diluted hydrofluoric acid supply device for supplying diluted hydrofluoric acid to the polished surface of the substrate to dissolve the metal-oxide film formed on the polished surface of the substrate and remove the metal-oxide film from the polished surface of the substrate;~~ and

a measuring device for monitoring pH or ion concentration of said electrolyzed water.

Claim 2 (Currently Amended) A polishing apparatus according to claim 1, ~~wherein said further comprising an additional~~ electrolyzed water supply device ~~supplies for supplying~~ said electrolyzed water to ~~the polished surface and~~ a back surface opposite to the polished surface of the substrate.

Claim 3 (Original) A polishing apparatus according to claim 1, further comprising an ultrasonic transducer for applying ultrasonic vibrations to said electrolyzed water before supplying said electrolyzed water to the substrate.

Claim 4 (Canceled)

Claim 5 (Original) A polishing apparatus according to claim 1, wherein the substrate has a copper layer thereon.

Claim 6 (Currently Amended) A polishing apparatus comprising:

a polishing section for polishing a surface of a substrate by holding the substrate and pressing the substrate against a polishing surface, the surface of the substrate having a semiconductor device thereon;

a cleaning section for cleaning at least a polishing surface of the substrate, said cleaning section having an electrolyzed water supply device for supplying electrolyzed water to the polished surface of the substrate to form a metal-oxide film on the polished surface of the substrate and a diluted hydrofluoric acid supply device for supplying diluted hydrofluoric acid to the polished surface of the substrate to dissolve the metal-oxide film formed on the polished surface of the substrate and remove the metal-oxide film from the polished surface of the substrate while supplying electrolyzed water to the substrate such that a metal-oxide film is formed on the polished surface of the substrate by said supplying electrolyzed water, and

a measuring device for monitoring pH or ion concentration of said electrolyzed water.

Claim 7 (Currently Amended) A polishing apparatus comprising:

a first polishing surface for conducting a primary polishing of a surface of a substrate by holding the substrate and pressing the substrate against said first polishing surface, the surface of the substrate having a semiconductor device thereon;

a cleaning section for cleaning at least a polished surface of the substrate, said cleaning section having an electrolyzed water supply device for supplying electrolyzed water to the polished surface of the substrate to form a metal-oxide film on the polished surface of the substrate and a diluted hydrofluoric acid supply device for supplying diluted hydrofluoric acid to the polished surface of the substrate to dissolve the metal-oxide film formed on the polished surface of the substrate and remove the metal-oxide film from the polished surface of the substrate while supplying electrolyzed water to the substrate such that a metal-oxide film is formed on the polished surface of the substrate by supplying said electrolyzed water,

a second polishing surface for conducting a secondary polishing of the polished surface of the substrate by holding the substrate and pressing the substrate against said second polishing surface;
and

a measuring device; for monitoring pH or ion concentration of said electrolyzed water.

Claim 8 (Currently Amended) A polishing apparatus comprising:

a polishing section for polishing a surface of a substrate by holding the substrate and pressing the substrate against a polishing surface, the surface of the substrate having a semiconductor device thereon;

an electrolyzed water supply device for supplying electrolyzed water to a polished surface of the substrate ~~such that to form~~ a metal-oxide film is formed on the polished surface of the substrate ~~by the supplying of said electrolyzed water,~~

a diluted hydrofluoric acid supply device for supplying diluted hydrofluoric acid to the polished surface of the substrate after supplying said electrolyzed water to dissolve the metal-oxide film formed on the polished surface of the substrate and remove the metal-oxide film from the polished surface of the substrate; and

a measuring device for monitoring pH or ion concentration of said electrolyzed water.

Claim 9 (Previously Presented) A polishing apparatus according to claim 1, further comprising an electrolyzed water generator for generating said electrolyzed water.

Claim 10 (Previously Presented) A polishing apparatus according to claim 9, further comprising a controller for controlling the pH or the ion concentration of said electrolyzed water generated by said electrolyzed water generator.

Claim 11 (Previously Presented) A polishing apparatus according to claim 6, further comprising an electrolyzed water generator for generating said electrolyzed water.

Claim 12 (Previously Presented) A polishing apparatus according to claim 11, further comprising a controller for controlling the pH or the ion concentration of said electrolyzed water generated by said electrolyzed water generator.

Claim 13 (Previously Presented) A polishing apparatus according to claim 7, further comprising an electrolyzed water generator for generating said electrolyzed water.

Claim 14 (Previously Presented) A polishing apparatus according to claim 13, further comprising a controller for controlling the pH or the ion concentration of said electrolyzed water generated by said electrolyzed water generator.

Claim 15 (Previously Presented) A polishing apparatus according to claim 8, further comprising an electrolyzed water generator for generating said electrolyzed water.

Claim 16 (Previously Presented) A polishing apparatus according to claim 15, further comprising a controller for controlling the pH or the ion concentration of said electrolyzed water generated by said electrolyzed water generator.